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ABSTRACT

Innovative resource management can enable institutions to respond to changes in enrollment while remaining within budgetary parameters. Successful use of these techniques allows institutions a flexible resource management strategy geared towards future needs and changes. Some increased resources may be used to enhance the students' academic and social experience by providing more programs and services at reasonable tuition rates and student fees. Recent trends reflect a shift from use of traditional revenue resources to use of non-traditional resources. This report examines a narrative background of current fiscal practices in higher education, followed by an explanation of various traditional fiscal resources and non-traditional resources and techniques with examples of successes. Data analysis is presented on trends in the use of higher education resources. The authors draw conclusions on ways institutions can respond to needs for resources. (HB)

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# Managing Traditional and Non-Traditional Resources in Higher Education: Time Series Analyses for Best Bets

Joanne Labeouf and Harold Geller

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# Managing Traditional and Non-Traditional Resources in Higher Education: Time Series Analyses for Best Bets

Joanne Labeouf and Harold Geller

## Introduction

Implementation of innovative resource management strategies could leave an institution in a healthy fiscal state ready to respond to shifting trends in enrollment while operating under fiscal budgetary constraints. Successful adaptation of these innovations may provide institutions with a flexible resource management strategy geared to respond to the future needs of an institution. Some increased resources may be used to enhance the students' academic and social experience by providing more programs and services at reasonable tuition rates and student fees. Recent trends, however, reflect the shift from institutional reliance on the use of traditional revenue resources to an increasing reliance on non-traditional methods of managing resources as a means to increase revenue.

This reports examines a narrative background of current fiscal practices followed by an explanation of the various traditional resources, and non-traditional resources and techniques with examples of successes. We present data and analyze trends in an attempt to predict the future of resources for higher education institutions, drawing conclusions on how institutions may best respond to their resource needs in light of some resource declines.

## Exit the 1990s: State of Higher Education Resources

As can be seen in Figure 1, total college enrollments in both two and four year institutions has generally been on the increase since statistics were monitored in the 1940s.

However, there have been some periods of decline in the enrollment picture, most recently in the middle of the 1980s. Enrollments since that period of decline have been on the rise since.

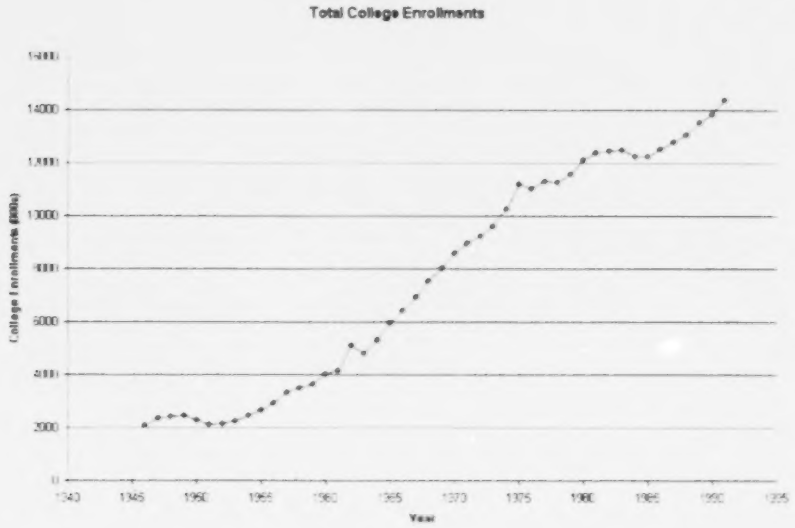


**Figure 1**

Figure 2 shows one view of the picture for private, state and federal revenue resources. The private revenue resources have increased at a more rapid pace than state revenues since the middle of the 1970s. While the trend appears to continue, there was a change in that trend during the middle of the 1980s. The view of the federal dollars is another matter completely. Even without considerations to inflation, the federal revenue resources, which includes grants, direct funds and student tuition aid, has come to a plateau.

Another traditional source of revenues to consider for this period of time is the tuition that those enrolled students provide. Figure 3 shows the tuition increases over the period of time from 1976 to 1996. While, from the viewpoint of the administration, this is a positive view of increasing revenue resources, it must be examined in the light of the inflation over the same period of time. Adjusting the tuition rise for inflation, using constant 1983 dollars,

administrators will get a different view of the rise of tuition, as a source of revenue. It still is increasing, however, not as much as indicative with the unadjusted curve (see Figure 4).

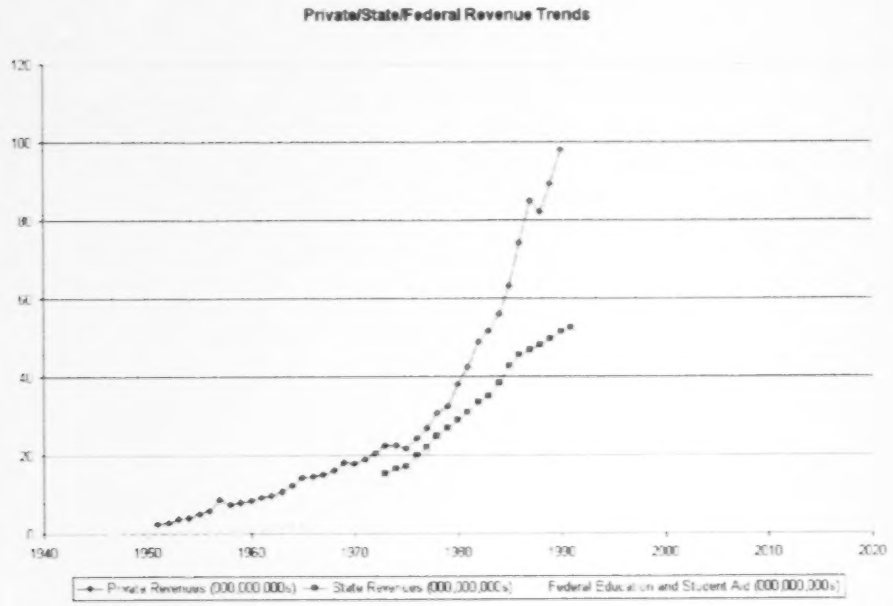


**Figure 2**

**Figure 3**

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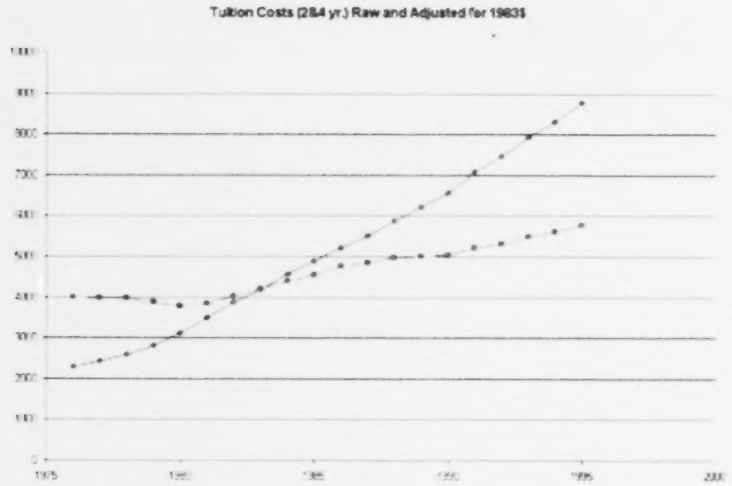


**Figure 4**

All in all, the picture for revenue resources for colleges and universities, public and private, looks, at first glance to be rather positive. However, there is that issue of looking at the trends considering the inflation that has taken place over the same period of time. While the U.S. Census Bureau provides a rosy view of increasing enrollments, as can be seen in Figure 5, the story is not the same for state and federal revenue resources as can be seen in Figure 6.

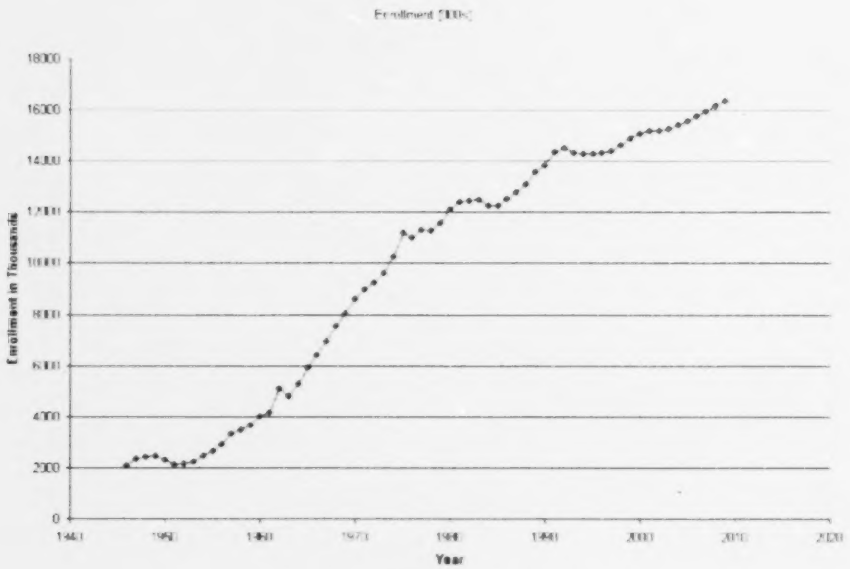


**Figure 5**

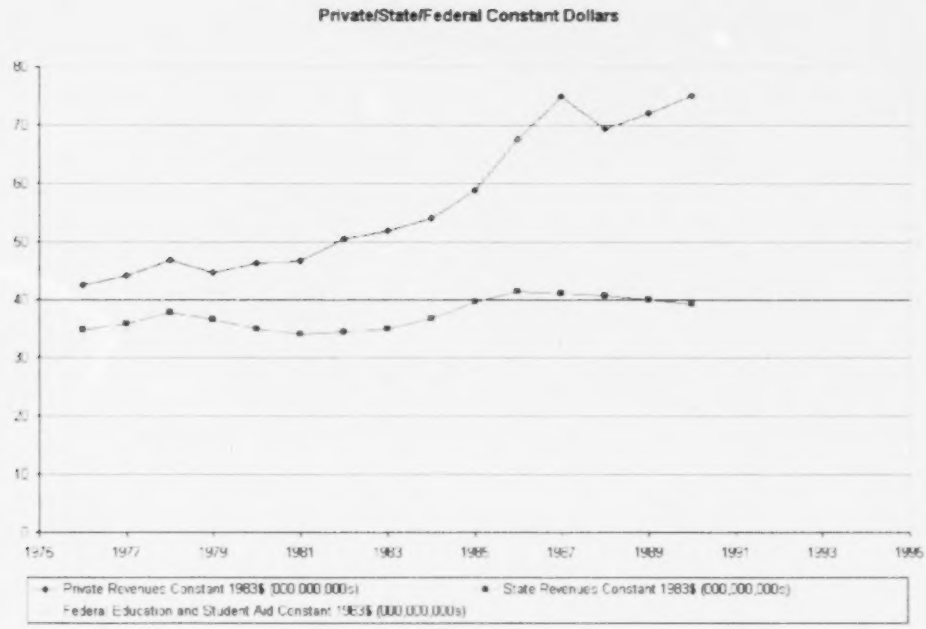


**Figure 6**

Adjusting for inflation, the federal revenue outlook for higher education provides a bleak view of ever-decreasing funds. The picture for state revenues does not look as bleak, as depicted in Figure 6. However, there are political issues that are taking hold in states, as federal funds have decreased, and these may pressure the state revenue resources to further decrease (Hovey, 1999). Thus, only private revenue resources appear to be on the increase at this point in time.

**How to Cope: Act or React**

The fact remains that higher educational institutions have an increasing need for financial support. As we have demonstrated in the previous section, state and federal funds together, *currently* top the institutions' list of resources. However, with state and federal support comes an increase in their control over institutional policy, enrollment and programs. In response, an institution that prefers to maintain autonomy over its policy-making, must look at ways to manage these declining resources in a period of expansion. It can cope with fiscal



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realities by either acting or reacting. Action through the expansion of present programs is a long-term fix that requires an institution to seek out new fund sources or increase present resources. Reaction through reprioritization is a short-term solution that moves the institution from one crisis to another. Both of these approaches require new skills in resource management, and careful research and planning (Alfred,1978).

There are of course many factors at work impacting the economy. A shift in the college age population is in play as demonstrated in Figure 7. Also, the economic picture for those individuals with only a high school education has deteriorated as depicted in Figure 8.

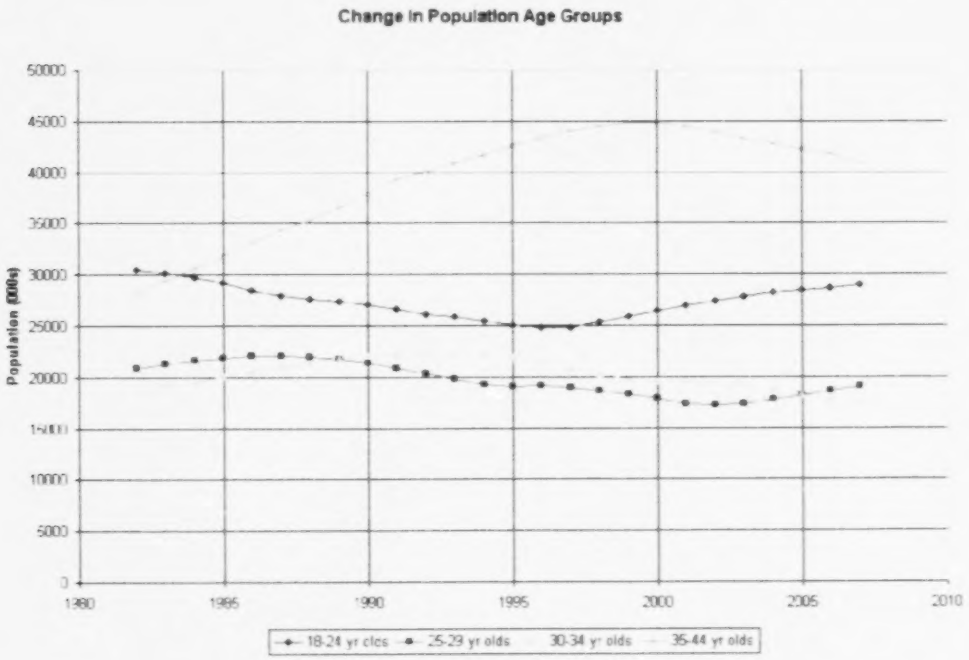


**Figure 7**

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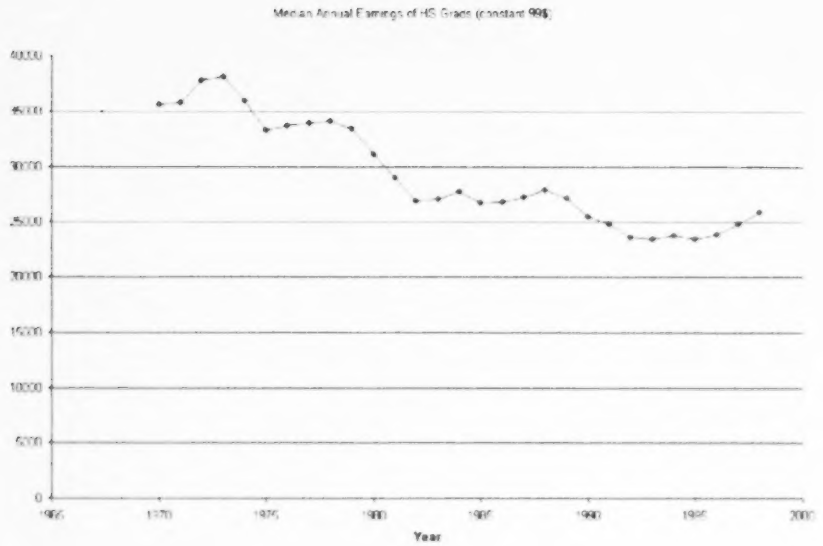


**Figure 8**

Educational institutions can look forward to an influx of baby boomers re-entering college at the same time that their children are entering. Individuals no longer look at one career, but now consider themselves life-long learners seeking to add a second, sometimes a third career to their life experience. Those who were formerly considered atypical students, such as single parents or minorities seeking new job skills, are now typical. This alone puts pressures on the institution to look at ways to react to the job market change. Businesses seek skilled workers who require training or re-training. Finally, there is competition for enrollment among the proprietary colleges, community colleges, four-year colleges, and universities. Increased enrollment translates into increased revenue from tuition and student fees. An institution can respond to these shifting patterns by raising tuition and student fees, by decreasing expenses and eliminating programs, or by creating new models through no-traditional programs. It can adapt a "less with less" strategy of limiting enrollment and/or cutting programs, or do "more with less" and improve performance while reducing or containing costs (Consortium for Policy Research in Education/CPRE, 1992).

**Traditional and Non-Traditional Revenue Resources**

Both traditional and non-traditional revenue resources have value in an institution's strategic planning, and both are reviewed below.

Traditional resources include revenue from tuition, student fees and associated subsidies from the state and federal government. An institution increases tuition only as a last resort. It does, however, occasionally increase student fees. Student fees support more or better services for students that, in turn, attract more students. For example, an institution can use increased fees to provide SmartCards for students that aide in the ease of accessing services; while the card does not increase revenue, it can be one of many services that attract and hold an enrollment. Attracting new constituencies, for example the blind and the deaf, is one way to increase a traditional resource. An articulation and cooperation agreement with a non-collegiate institution and agency is another way to increase traditional resources. Both do so by increasing enrollment. Another example is a two-year college that articulates with a four-year college and both agree on transfer programs. Both institutions can market the transfer benefit to attract enrollments each at its own level. Dual programs between a local high school and community college allow a student to take a college level course for credit while in high school. This encourages the high school student to consider continued or future enrollment in the community college upon graduation (Alfred, 1978). Taking advantage of federal and state subsidies through grants and loans in and of itself does not increase revenues but it does increase enrollments and retention. The institution's financial aid administrator markets available loans to perspective and existing students. Federal Perkins loans benefit a student demonstrating financial need. Federal Pell grants are funds dispensed to the student. State grants, scholarships, loans, and work program options are available for students. There are

many types of federal loans: HEAL, HPSL, Nursing, subsidized and unsubsidized Stafford loans to name a few (Octamerion, 1995-6). Although improving access to these available resources translates into increased enrollment, this represents a short-term fix over which the institution has no long-term control. An institution needs long term fiscal management techniques that use non-traditional modes of developing resources to respond to elastic enrollment patterns.

Non-traditional resources management explores innovative ways to increase revenue that, in the long run, can be more dependable revenue sources. This is a direct result of the decrease in government support for higher education, the increased cost for programs, and the burden of a mature, tenured faculty. Institutions across the nation are trying various non-traditional methods and their successes and failures in their endeavors serve as examples for future planning.

Lobbying and legislation is one way to assure future revenue for education. Institutions can aggressively make a case to federal and state agencies or pay someone else to do so. Many institutions have employed government relations officers for years. A new slant on this is the forming of ad hoc lobbying consortia between institutions and private firms to look out for the interests of the university's research. This is a proactive measure that can increase the institution's ability to garner research funds. (Breneman et al, 1996) Another legislative effort is the expanded G.I. Bill. This will provide increased funds for veterans, and increase/retain enrollment.

Foundations and associations are another source of non-traditional revenue. In the 1980s there was a community college foundation movement that focused on strategies to bring in money. A comprehensive survey of 1,222 community colleges, with 798 respondents, done

by Angel and Gates in 1987 showed that there were 649 affiliated foundations among the respondents (82%) with overall assets of a quarter of a billion dollars. This is depicted in Figure 9.

**Figure 9**

Extrapolating this data for community colleges nationwide would mean that there are over 900 community colleges with foundations. Community college foundations were encouraged by the 1965 Higher Education Act that offered federal funds for grants and contract competition with a match requirement. The number of foundations increased during the ensuing years as depicted in Figure 10. All the while there has been a dramatic decrease in public funding. The survey shows that by the late 1980s, private source funding was a success. Furthermore, with proper planning and determined effective leadership, two-year community colleges have raised significant amounts of revenue. The best example of a community college adapting the four-year/university foundation paradigm to a community college is Miami-Dade's Endowed Teaching Chair Program. The program was endowed by using the Florida Academic Improvement Trust Fund (FAITF), a state eminent scholars' endowment match



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program for public community college foundations. A $45,000 private contribution created a $30,000 state match on a 60/40 basis. As a result, Miami-Dade successfully endowed 100 teaching chairs over three years. The purpose of the program, although not common to community colleges, is to award and stimulate excellence in teaching. The endowed chair program at Miami-Dade becomes a recruitment tool used by the institution to attract and retain outstanding faculty. Similarly in four-year colleges and universities, alumni relations programs are in place, yet little emphasis is placed on alumni relations in community colleges. Monies raised can be used to endow faculty chairs, fund new facilities, and develop/enhance programs (Catanzaro et al, 1989). Overall the community college has much to gain by looking at the various non-traditional models in place in four-year colleges and universities, especially as these same institutions continue to seek even more innovative ways to increase revenue.

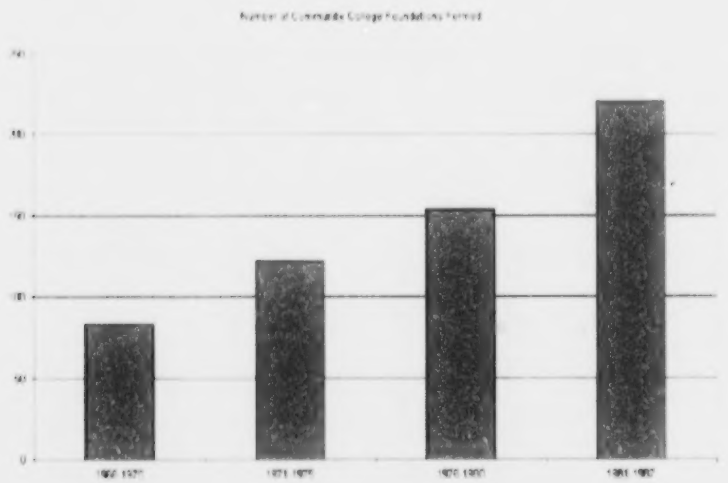

**Figure 10**

Combining the concepts of non-traditional revenue and non-traditional education results in three types of creative revenue-producing partnerships: work place training, co-sponsorship and distance learning. The work place or contract training model serves the business and the community while generating revenue. An example could be a local business/college partnering

to provide workers with specific training. Program co-sponsorship is effective when it is opened to include other business organizations to defray costs. The best example of co-sponsorship is Triton College (River Grove, Illinois) Continuing Education Center for Health Professions). The sponsors included Triton College, the Illinois Department of Professional Regulation, and the Illinois Department of Public Health among others. Partners make their own agreement as to revenue distribution and bill paying. (Catanzaro et al, 1989) The third model is distance learning or the media technology model that includes teleconferencing, instructional television fixed service and cable networks. This model provides a non-traditional way of meeting the educational delivery needs of a community delivery region. Instruction is offered at non-traditional time slots in a non-traditional way. Triton College's partnership with the Employee Development Institution is another example of a successful partnering with business and agencies for the purpose of increasing revenues. The success of this partnership was based on cooperation and the use of cable network, instructional TV fixed service, and satellite learning to promote the philosophy of the institution. The real revenue in cable comes from video production sponsored by contracts with business and industry. The best example of success in instructional TV fixed service (ITFS) is the Emergency Medical Training program for firefighters developed by Triton's Continuing Education Center for Health Professions. Satellite video teleconferencing allows Triton to receive teleconferences that are live programs telecast at minimal cost to a targeted audience via satellite. Triton can also produce and distribute teleconferences, as well as provide training sessions for corporate managers, or to a private audience. The overall result is that Triton's distance education program serves the educational needs of the community and enhances revenues (Catanzaro et al, 1989).

Yet another non-traditional way of increasing revenue is with business/university partnerships in research. Many state and local agencies are interested in joint economic development with community colleges especially if it could result in more jobs and improve the quality of life of the communities served. The economic development projects are funded with state subsidies, local tax levies and direct fees. Belmont Technical College in southeast Ohio is the best example. They developed a three-way partnership agreement with United Steelworkers of America, the college and a steel manufacturing company. The college 'leveraged' dollars (or matched one agency with subsidy dollars) along with student fee income to put the joint venture on solid ground. The venture not only funded the partnership, it laid the basis for a long-term relationship. The college also set up a day care facility for evening students by using a State Department of Education grant. The "Nightwatch' program resulted in an increase in evening enrollments (Catanzaro et al, 1989). These successes serve to reinforce the value non-traditional funding opportunities through partnering research ventures in sustaining economic activities.

Entrepreneurship, or for-profit ventures, in colleges and universities has taken hold and these institutions can once again serve as the model for community colleges. For-profit ventures can lead to revenue diversification for a non-profit community college. A diversification activity is a business venture in which the college is responsible because of its ownership role of all or of the controlling share of a venture. The overall purpose is to make a profit to support educational activities. This type of venture reduces the risk to the organization by relying on more than one source of income. The best example here is Stanford University in California. They earn millions from its industrial park in Palo Alto. The University of Wisconsin operates a shopping center for profit (Catanzaro et al, 1989). For-

profit ventures operate under the auspices of an existing college foundation, and profits cannot exceed 35% of the foundation's total revenue. Diversification takes advantage of available physical assets and puts them into a profit making service. For example, a college with a food service program can make use of a cafeteria's kitchen equipment for a catering operation that generates income. Revenue diversification alone cannot solve a college's financial problems but because risks are usually minimal, it can make a modest profit (Catanzaro et al, 1989).

The commercial development of real estate can serve as an important source of revenue. Schoolcraft College in Livonia Michigan is a success story. By allocating a portion of college land for a commercial enterprise, they created a new option for revenue generation through the land leasing. Schoolcraft's venture into real estate development protected the long-term interests of the college while the overall project enhanced the value of the college's land. As a result, the college experienced a steady stream of income for a specified number of years (Catanzaro et al, 1989).

A performance contract is a specific contract, albeit risky because it is time sensitive, that is entered into by a college and another agency for mutual benefit. Although this type of contract is more specific than a grant, there is more available funding. In addition, unused grant funds are returned to the funding agency, where excess funds in performance contracts are retained by the institution for reinvestment in the program. As a result of the Job Training Partnership Act (JTPA), performance contracts are offered for job training and employment with JTPA as the primary source of performance contracts. The contract is more flexible about the details of the service, however, once the contract is signed, the product must be produced to the letter within a specified time and with accountability. The amount provided is a funding cap rather than an award as with a grant. Failure to live up to the contract results in project

liability for the institution. The best example is Florida Community College at Jacksonville (FCCJ), and its success rests on its straightforward contract management. FCCJ hired a contracts operations officer who took on the project from start to finish, and was involved in the planning and submission of new contracts that ensured realistic objectives. FCCJ contracted successfully with the Department of Defense, the Department of Corrections, and the Department of Education. Their willingness to dedicate a contract manager to the project led to increased revenue and reinvestment of unused funds for the program. (Catanzaro et al, 1989)

Examples of other successful methods of creating discretionary income for an institution abound. Companies like Coca Cola and Pepsi exchange income for exclusive distribution rights on campuses. Investment in telecommunications can create continuing cash flow through the student billing application. Adding video and data connections in residence halls aids in student retention. In making a phone service deal with a telecommunications company, an institution provides more attractive service rates to students then they can get on their own. Colleges buy long-distance telephone service wholesale and resell the service to the student. This creates incremental income that pays for the investment in new technology. The billing application for the service creates a cash flow that eventually supports better student service. However, success in student billing requires the application of business functions – marketing, pricing, customer service, billing, accounting, collection, and receivables management (Manning, 1999)

Another way of increasing revenue is through housing partnerships between colleges and real estate agencies. Through the partnering, a college provides state-of-the-art facilities with living and learning environments that students want. The partnering leads to improved

revenue streams from rent, or room rates, and related services. Additionally, communication technology, complementary services, parking and a summer transient business reap income benefits. Colleges can use earned income to reduce loan periods, decrease student rents or to generate cash flow. Beyond that, available housing and amenities enhance recruiting and retention for the college (Johannesen, 1999). Delinquent tuition recovery through an alternative-type lender also increases revenue. With in-house collections, many bursars have had to resort to collection agencies with their high fees, slow return and aggressive tactics. Alternatively a college can use funding as a solution by providing the funding institution, likely an alternative lender, who is willing to make loans to at-risk students. The student makes payments directly to the lender. The lending institution pays the institution usually within 60 days after loan agreements are signed and the students begin to make their payments. It is a win-win situation (Gardner, 1999).

Shared services through community partnership can help build facilities such as a library. Two of Front Range Community College's (Colorado) campus libraries faced problems of space and budget restraints. The City of Westminster 's local public libraries faced a high demand for additional branches. The college and the city shared the construction costs of a joint facility with each gaining more in space, books, and equipment they would have been possible if they each did a separate facility. An energy conservation project between Lee College in Texas and the Houston Lighting and Power Company resulting in a grant from the Department of Energy Institutional Conservation Program that provided funds to implement energy-conservation measures. The benefits to the college included an increase in savings, a decrease in energy consumption. The savings generated were expected to pay for the college's share of the project within a two-year period (League for Innovation, 1999). Success stories

reflect institutional innovation. One college saved by installing an intrusion alarm system and eliminating the salary of night watchmen; another shifted to alternative fuel sources in fleet vehicles; yet another used the "slow fill" employment process for replacing vacant positions by delaying the fill for a few months, and saving the unused salary. All attempts to increase savings or income add to the institution's ability to invest in the future.

**Conclusions and Recommendations**

Based upon our analyses of the data from the NCES and ERIC, it appears certain that the future of revenues for higher education is in the midst of change. Federal funds have been decreasing over the past quarter century. This includes student aid as well as grants and directed funds. State funds are undergoing changes partially linked to the federal changes. States have managed to maintain a level (constant dollars) pace of funding, but in the past five years there has been a noticeable decline. All indications are that state funds will decrease at a greater pace in the future. While private funds have had some reversals over the years in the rates of change, this revenue stream has been generally on the increase throughout record keeping years. We have discussed how many institutions have used innovative approaches to tap many private revenue resources. This is necessary to offset decreases in the public funds.

Higher education leadership must utilize modern research techniques to assist in their strategic planning for their respective institutions. The technology is available to the leaders of all institutions and has been for some time now (Glover and Krotseng, 1993). However, now every leader has the power on his or her own desktop to make use of executive information systems. A good executive information system will allow a leader to forecast and study 'what-if' scenarios. Cost study guidelines are available for the uninitiated (Halstead, 1990). Fourier analyses can be utilized to help predict cycles of alternate funding streams, as depicted in

Figures 11 and 12. We found federal and state funding respectively is cyclical over two, four and eight year periods, roughly equivalent to administration and legislature turnover cycles.

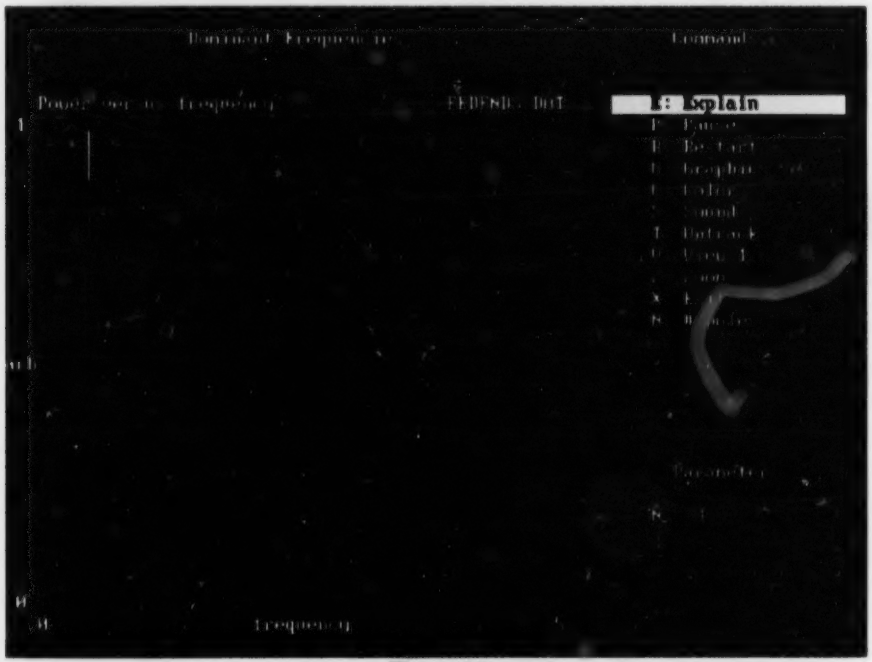


**Figure 11**

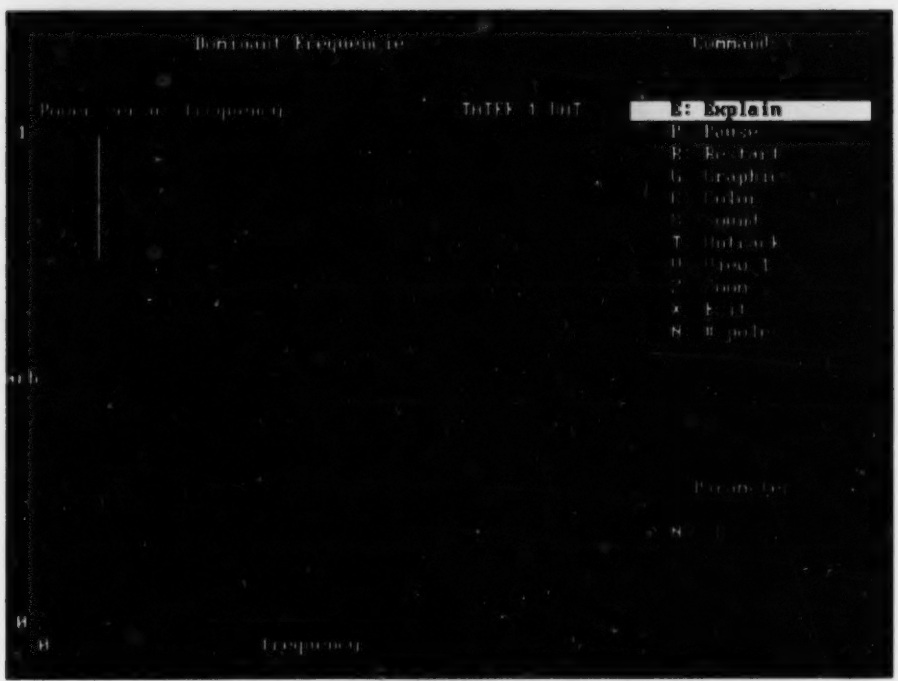


**Figure 12**

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Our analyses do suggest that higher educational institutions, led by visionary leaders that promote innovative ways of resource management, will experience an increase in revenue enough so as to offset the recent trends in public revenue resources.

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